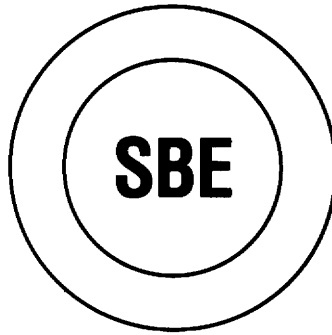


**Comments of the
Society of Broadcast Engineers, Inc.**

**MM Dockets 00-010/99-292
Class A TV**



February 10, 2000

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SOCIETY OF BROADCAST ENGINEERS, INC.
Indianapolis, Indiana

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	MM Docket No. 00-010
Establishment of a Class A)	MM Docket No. 99-292
Television Service)	RM-9260
)	

To: The Commission

Comments of the Society of Broadcast Engineers, Inc.

1. The Society of Broadcast Engineers, Incorporated (SBE), the national association of broadcast engineers and technical communications professionals, with more than 5,000 members world wide, hereby respectfully submits its comments in the above-captioned Order and Notice of Proposed Rule Making relating to Class A Television stations.

I. Community Broadcasters Protection Act of 1999

2. The November 29, 1999, adoption of the Community Broadcasters Protection Act of 1999 ("CBPA"), Section 5008 to Public Law No. 106-113, makes many of the issues raised in the September 22, 1999, Notice of Proposed Rule Making ("NPRM") moot. Accordingly, the FCC has re-issued that rule making in the form of a January 13, 2000, Order and Notice of Proposed Rule Making ("ONPRM"). These SBE comments are therefore directed at the issues raised in that ONPRM.

3. The CBPA is one of the most extreme examples SBE has seen of an unjustified give away of public resources. Licensees of LPTV stations that obtained FCC authority for a relative pittance compared to the cost of obtaining a full-service, primary, TV station license, will now be unjustly enriched, as the market value of a LPTV station qualifying for Class A protected status will be increased ten to hundred fold overnight. LPTV applicants were well aware of the secondary nature of their authorizations, and it is wrong to upgrade LPTV licenses from secondary to primary without placing the more valuable Class A licenses out for auction; if the existing LPTV licensee is the high bidder, then fine, it should then be able to reap the benefit of the much greater worth of the now primary station. But because the CBPA places no ownership or transfer restrictions on Class A TV licenses, nothing will prevent those licensees from selling to traditional broadcast interests and realizing huge profits. In

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return, the traditional broadcast interest will have no obligation to maintain the "program diversity" that supposedly only Class A TV stations could provide in medium to large markets, yet this supposed program diversity was a major public interest justification for the Congressional intervention.

4. The transcript of the April 13, 1999, hearing before the House Subcommittee on Telecommunications, Trade, and Consumer Protection ("Transcript") indicates that the Honorable Thomas C. Sawyer, Democrat, 14th District, Ohio, testified that Akron, Ohio does not have a full-service TV "broadcast facility of any kind,"¹ and that it was accordingly only due to the presence of LPTV Station WAOH-LP, NTSC Channel 29, Akron, that the residents of Akron have access to local television programming. Yet examination of the 1999 Television Factbook shows no fewer than three full-service TV stations licensed to Akron: WVPX(TV), Channel 23; WEAO(TV), Channel 49; and WBNX-TV, Channel 55.² Nevertheless, this incorrect information appears to have been taken at face value by the Subcommittee as justification for why WAOH-LP in particular, and LPTV stations in general, were in need of being upgraded to Class A protected status.

5. The hearing transcript further shows that certain senior FCC officials also testified, claiming that the FCC was "working with the LPTV industry" and had taken "numerous steps to mitigate the impact [of displacing full-service digital television ("DTV") allotments] on lower-power television stations." What was not explained to the Subcommittee was that a major supposed mitigation measure, that of allowing displaced LPTV stations to base their channel search studies on OET-69 methodologies, is to this day not available to LPTV licensees because LPTV Branch staff still have not been provided OET-69 computer software to allow the independent checking of LPTV/TV Translator displacement applications that rely on OET-69 methodologies (*e.g.*, the terrain-sensitive Longley-Rice propagation model rather than the 50-year old, archaic, FCC F(50,50) and F(50,10) curves, and the use of receiving antenna directionality), as allowed by Sections 74.705(e) and 74.707(e) of the Commission's Rules. Therefore, much of the pressure being put on displaced LPTV stations is unnecessary, and would not exist if the Commission provided LPTV Branch staff with OET-69 computer software.

¹ Transcript, at Page 6.

² Mr. Sawyer's prepared statement made a somewhat different claim, that Akron "does not have a major local [television] broadcast affiliate located within its own metropolitan area." However, this claim would also appear to be incorrect because WVPX(TV) is a Paxson affiliate.

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6. In effect, SBE believes that the Subcommittee was conned into adopting a law based on inaccurate information, and now full-service TV broadcasters will have to bear the consequences of this attempt to micro-manage a technical regulatory agency such as the FCC.

II. The January 28, 2000, Deadline Imposed by the CBPA Must Stand

7. At Paragraph 9, the ONPRM notes that one portion of the CBPA used the mandatory verb "shall" when specifying the deadline for LPTV stations filing a Certificate of Eligibility ("COE") for upgrade to Class A primary status, whereas a later portion of the CBPA used the permissive verb "may." The Commission accordingly asks whether applications for Class A status after the January 28, 2000, deadline specified in the CBPA (*i.e.*, 60 days after the act's adoption) can be accepted. SBE believes that the answer must be "no." SBE points out that the CBPA gave full-service DTV stations a three-month "safety valve" deadline of May 1, 2000, to submit maximization applications that could continue to trump an otherwise precluding Class A application. To allow LPTV stations to continue to submit COEs after the January 28, 2000, deadline without a matching extension of the May 1, 2000, deadline would be blatantly unfair to full-service DTV stations. Since the CBPA is unambiguous on the May 1, 2000, deadline, SBE concludes that for the FCC to allow LPTV stations to apply for Class A status after the January 28, 2000, deadline would violate the Congressional intent of allowing full-service DTV stations a reasonable period of time to 1) determine if any COE filings would have a preclusionary impact and 2) prepare and file a maximization application by the May 1, 2000, deadline, thereby superseding such preclusionary impact.

8. SBE notes that not adhering to the January 28, 2000, deadline would open up another possibility that it believes was not intended by Congress: namely, that the much larger number of conventional TV Translator stations could 1) convert to LPTV status (by simply writing a letter to the Commission, so declaring); 2) begin a token 3 hours per week of local origination (which the CBPA does not define as to its quality; thus, a consumer-grade VCR playing back 3 hours per week of dated, non-copyrighted, material would apparently qualify); and 3) after 90 days apply for Class A status. Thus, instead of perhaps 400 existing LPTVs that could meet the November 29, 1999, 90-day retroactive criteria, there could potentially be 7,500 (or so) stations meeting such criteria. Such mischief must not be allowed to happen. Therefore, SBE urges the FCC to honor the plain intent of the CBPA, which was to

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grandfather in a relatively small number of LPTV stations that had already been transmitting locally-originated programming.³

9. At Paragraph 18, the ONPRM notes that Section (f)(2)(B) of the CBPA contains a broadly worded alternative eligibility criteria for Class A status if "the Commission determines that the public interest, convenience, and necessity would be served by treating the station as a qualifying low-power television station for purposes of this section, or for other reasons determined by the Commission." SBE urges the Commission not to treat this wording as a "loophole" for Class A eligibility.⁴ SBE points out that the "public interest" includes the interests of full-service TV stations as well as LPTV stations, and that the Commission must not trample the rights of full-service stations in a misguided effort to allow additional LPTV stations that cannot demonstrate they meet the triad requirement imposed by the CBPA (18 hours/day for operation and 3 hours/week for local origination for the 90-day period preceding the signing of the CBPA, and compliance with the FCC Rules) to nevertheless upgrade to Class A protected status. For each non-qualifying LPTV station that the Commission would allow to upgrade to Class A it would be violating the rights of DTV stations that received out-of-core DTV allotments and whose NTSC channel is also out-of-core. These stations will not be able to search for an in-core DTV channel until the end of the transition period, meaning that the initial universe of qualifying Class A TV stations will have beaten those stations to such core channels by at least six years. It will be bad enough for such a "backwards" allotment situation to occur for an estimated 200 to 400 LPTV

³ On February 8, 2000, two days before the comment deadline to this rule making, the Commission released a Public Notice listing all low-power TV stations that had filed a Certificate of Eligibility for Class A status. Incredibly, this list contains 1,616 stations, of which only 511 have "letterized" call signs with the "-LP" suffix. The other 1,105 stations have conventional alpha-numeric call signs, and it seems unlikely that all of these are operating as LPTV stations, and would have additionally met the CBPA local origination requirement. SBE notes that the Public Notice included the observation that "In the event that a low power television licensee is not able to satisfy the foregoing criteria, the Commission is empowered by the legislation to issue a certificate of eligibility if it determines that the public interest, convenience and necessity would be served thereby."

If, in fact, it is the intent of the Commission to effectively not enforce the CBPA requirement that only LPTV stations that had been locally originating at least three hours per week for the 90-day period prior to the Act's adoption are eligible to upgrade to Class A primary status, by routinely finding it to be in the "public interest" to grant Class A status to TV Translator stations not meeting the local origination requirement, SBE believes that such a policy would be against the intent of Congress and the plain language of the CBPA.

⁴ For example, at Paragraph 21 of the ONPRM, the Commission offers that foreign language LPTV stations "cannot meet the locally produced programming or other statutory eligibility criteria." SBE is not aware of any reasons why a "foreign language" LPTV station cannot meet the CBPA triad criteria any more so than a non-foreign language LPTV station. Surely the FCC is not suggesting that a "foreign language" LPTV station should not have to demonstrate that it meets all pertinent interference criteria.

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stations able to meet the congressionally-mandated CBPA triad criteria, but it would be a mockery of the "public interest, convenience, and necessity" Communications Act mandate to let a much larger universe of LPTV and/or TV Translator stations avail themselves to a scheme where a previously secondary station can preclude core channels to primary DTV stations.

III. Protected Contours for Class A TVs

10. At Paragraph 10, the ONPRM proposes to use the same 62 dBu (for VHF low-band), 68 dBu (for VHF high-band), and 74 dBu (for UHF) F(50,50) protected contours now applying to TV Translator and LPTV stations to Class A TV stations operating with conventional NTSC analog modulation; SBE endorses this proposal. For Class A TV stations operating with digital 8VSB modulation, SBE proposes using the same decibel offsets (15 dB for VHF low-band, 12 dB for VHF high-band, and 10 dB for UHF) for establishing Class A protected DTV thresholds. These would therefore be the F(50,10) 43 dBu for VHF low-band⁵; the F(50,10) 48 dBu for VHF high-band; and the dipole-adjusted F(50,10) 51 dBu.

IV. Full-Service Stations Should Have Petition to Deny Rights

11. Paragraph 12 of the ONPRM notes that "a Class A application could be denied if a certification of eligibility were later determined to be incorrect." SBE believes that many COEs will be technically deficient, in that they will be for LPTV facilities that fail to meet all of the Commission's current rules; *i.e.*, they fail to protect existing NTSC stations, existing DTV stations, or DTV allotments. Accordingly, SBE believes it imperative that licensees of full-service TV stations have the right to file a Petition to Deny against any COE that would potentially preclude the full service station's ability to maximize and for which an OET-69 interference study shows a non-zero number of persons with unique interference to an NTSC or DTV permit or license, or $\geq 0.5\%$ of new interference to a DTV allotment.

V. Protection Criteria for Class A TV Stations

12. Paragraph 13 of the ONPRM asks what interference protection should be afforded to Class A TV stations. SBE believes it should be a 2% *de minimus* criteria; that is, the same level of protection afforded to existing NTSC full-service TV stations, up to a 10% total

⁵ However, and as discussed in Paragraph 20 to these SBE comments, and Paragraph 25 of the ONPRM, it appears that the CBPA precludes Class A TV stations on VHF low-band Channels 2–6.

interference cap. Thus, just as full-service NTSC and DTV stations are at risk of losing up to 10% of the terrain-limited service they would otherwise enjoy in the absence of interference from other stations (in up to 2% bites), Class A TV stations should be subject to this same risk; or, in other words, Class A TV stations should not be given greater protection than given to full-service NTSC or full-service DTV stations. For purposes of calculating the 10% lifetime cap, the Commission needs to publish the "baseline" interference-free population accruing to each Class A TV station at the time of its upgrade to Class A status.

VI. DTV Change Applications

13. At Paragraph 17, the ONPRM notes that the CBPA requires that if a full-service DTV station has been granted a CP to maximize its coverage, and then later files an application for a change in facilities that reduces its service area, only that reduced service area need be protected by Class A TV stations. The ONPRM concludes that few, if any, DTV stations would follow this course, and warns "those licensees considering it should be aware of the consequences." The ONPRM asks for comment on such an "interpretation."

14. SBE believes that this is a flawed reading of the intent of the CBPA. First, this scenario is not as unlikely as the Commission apparently thinks: for example, at least two of the Denver area DTV stations applied for full-service and/or maximized DTV facilities at the Lookout Mountain communications site. But, due to fears about radio frequency radiation (RFR), neighborhood groups have thus far been successful in obstructing the required local permission to build such DTV facilities. So as not to delay implementation of DTV service, at least two of the Denver area stations have applied to build "low-power," temporary DTV facilities using their downtown TV station studios as the transmitting locations. Under the Commission's proposal, these stations might not only lose their ability to maximize, but could even lose their ability to build their allotted DTV facilities. Clearly, such a result would violate the Congressional mandate to implement DTV as soon as possible, and then terminate NTSC service, so that spectrum can be returned to the federal government for auction purposes. Accordingly, SBE believes that the Commission must interpret Section (f)(1)(E) of the CBPA as requiring protection of permitted or licensed DTV facilities, or the DTV allotment, whichever is greater. The alternative would be to preclude full-service DTV stations from ever considering interim, low-power DTV facilities.⁶

⁶ Apparently both of the Denver stations that have constructed interim, low-power, DTV facilities located at their studio have done so on a Special Temporary Authority ("STA") basis, rather than a formal amendment of their Lookout Mountain applications. The Commission needs to clarify whether interim

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15. At Paragraph 36 of the ONPRM, the Commission concludes that Section (1)(D) of the CBPA appears to give full power stations the flexibility to make allotment changes (i.e., substitute one DTV channel for another DTV channel) "even after certification of an LPTV station's eligibility for Class A status." SBE is delighted at this reading of the CBPA, and wholly supports such an interpretation.

VII. Impact on TV BAS Frequencies

16. Section 74.602(f) of the FCC Rules stipulates that TV broadcast auxiliary service ("BAS") stations licensed to TV Translators or to LPTV stations are secondary; that is, if a full-service TV or DTV station needs a microwave channel being used by a secondary TV Translator or LPTV for a studio-to-transmitter link ("STL") or for a point-to-point Inter City Relay ("ICR"), the full-service station's need for a TV BAS microwave channel can "bump" the LPTV station's use of the microwave channel. The Commission therefore needs to address whether an LPTV station that upgrades to Class A primary status will also have any TV BAS microwave links it might currently have similarly upgraded to primary status. A corollary issue is whether a Class A LPTV that obtains a new TV BAS microwave license will automatically be primary on that new frequency. SBE proposes that the answers to both questions should be "yes," as it would be illogical to grant protected status for Class A TV stations but to keep their use of TV BAS frequencies secondary. However, SBE cautions Class A TV stations that in the larger TV markets TV BAS frequencies are already heavily congested, and new STL or ICR stations may be difficult or impossible to add. Also, SBE will expect that any Class A stations using their new-found primary status to justify capital improvements that may include a new or modified microwave link will frequency coordinate such links in the same manner that full-service TV stations do.

VIII. EAS Requirements

17. The ONPRM is silent of the Emergency Alert System ("EAS") obligations of Class A TV stations. SBE proposes that Class A TV stations have the same EAS obligations as full-service NTSC and DTV stations. With primary status should come the same EAS obligations that full-service TV stations must observe.

DTV facilities authorized by STA avoid a risk of becoming locked-in to low-power, sub-DTV allotment facilities.

IX. Class A Should Be Licensed Under Part 73 of the FCC Rules

18. At Paragraph 20, the ONPRM asks if Class A TV stations should be authorized under Part 73 or Part 74 of the FCC Rules. SBE believes it should be Part 73, because of the primary, protected, nature of Class A TV stations. Similarly, applications for Class A TV stations should use FCC Form 301, and not FCC Form 346.

X. Common Ownership

19. At Paragraph 22, the ONPRM notes that LPTV stations authorized as of November 29, 1999, may seek Class A status without regard to the station owner's interest in other broadcast stations, but asks if the CBPA ownership exemption clause confer only a right to convert (assuming all other criteria are met)? SBE believes that ownership restrictions for post November 29, 1999, LPTV stations should be construed as narrowly as possible. Licensees of November 29, 1999, or earlier LPTV stations able to convert to Class A will have already received an incredible windfall; this windfall should not be extended to licensees of TV Translator stations that attempt to convert to locally originating LPTV stations after the fact, with the goal of then upgrading to Class A status, and then sale of the now far more valuable license to a more traditional, "deep pockets" broadcast entity.

XI. No Paired DTV Channels for Class A, LPTV, or TV Translator Licensees

20. At Paragraph 23, the ONPRM asks if the CBPA could be interpreted to obligate the Commission to assign a second 6-MHz TV channel to Class A, LPTV, or TV Translator stations, for DTV transmissions simultaneous with the station's NTSC analog transmissions. SBE rejects any such interpretation of the CBPA, and believes that all the CBPA mandates the Commission to do is to allow a Class A TV station to convert to digital operation in lieu of NTSC analog operation.

XII. No Class A TVs on Channels 2-6

21. At Paragraph 24, the ONPRM notes that when the Sixth Reconsideration Order to MM Docket 87-268 added VHF low-band Channels 2-6 to the "core" spectrum, this added approximately 175 additional channels available for DTV assignments. The ONPRM also notes that the CBPA requires that the Commission NOT grant Class A stations on any of these additional 175 channel allotments. SBE sees no other way to read these two provisions as requiring that no Class A grants be made on VHF low-band Channels 2-6, as proposed in the last sentence of Paragraph 24.

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22. SBE notes that at Paragraph 51 of the ONPRM, the Commission states it "proposes to grant Class A status only to qualifying stations authorized on channels 2–51." This conflicts with Paragraph 24 (or at least pre-judges Paragraph 24). SBE again urges the Commission to comply with the CBPA prohibition against granting Class A stations on Channels 2–6.

XIII. Maximization Definition

23. Paragraph 32 of the ONPRM asks for a definition of "maximization" of a DTV facility, for CBPA purposes. SBE believes that any application that is not a "checklist" application should be treated as a "maximization" application. Thus, although DTV applications proposing greater height or power than originally allotted would qualify as a "maximization" application, so would an application proposing a site more than 5 kilometers from the allotted site.

24. SBE agrees with the approach proposed at Paragraph 33 of the ONPRM, namely that Class A stations must protect all DTV allotments, permits, and licenses, and not just DTV allotments, permits, and licenses with "technical problems" to a proposed Class A TV station.

25. Paragraph 34 of the ONPRM asks how to treat TV stations whose NTSC channel and DTV channel are both outside of the Channel 2–51 core spectrum. Unfortunately, SBE sees no way to preserve such station's ability to maximize on their eventual in-core channel, because that will depend on the spectrum conditions at the end of the transition period, and, thanks to the CBPA, the ability of a full-service station unfortunate to have out-of-core channels for both its NTSC and DTV operations will be negatively impacted by the Congressionally-mandated presence of co-primary Class A TV stations. Unless Congress has the wisdom to un-do its inappropriate meddling in highly complex spectrum issues, such double out-of-core full-service TV stations will be the biggest victims of the CBPA.

XIV. Protection of LPTV and TV Translator Stations by Class A TV Stations

26. At Paragraph 38 of the ONPRM, the Commission proposes that Class A TV stations protect existing LPTV and TV Translator stations pursuant to Section 74.707 of the FCC Rules; that is, on a no-prohibited contour overlap basis. This paragraph goes on to characterize Section 74.707 as protection based on certain desired-to-undesired ("D/U") ratios. SBE wishes to point out that these are two entirely different criteria: a D/U ratio criteria may allow massive otherwise prohibited contour overlaps (for example, Section 74.707 requires a -6 dB D/U for an upper-adjacent channel situation, meaning that, for UHF

spectrum, the F(50,50) 80 dBu contour of the newcomer station cannot overlap the F(50,50) 74 dBu contour of the protected station; this requires that the newcomer station be located sufficiently far outside of the protected station's contour that no contour overlap occurs. In contrast, a D/U only criteria would allow the newcomer station to be located inside the protected station's contour, so long as nowhere does the D/U ratio exceed -6 dB; this could allow the newcomer station to co-locate with the protected station, match the protected station's pattern, and operate with four times more effective radiated power ("ERP") than the protected station.) Therefore, in its Report and Order, the Commission needs to clarify just what it is referring to at Paragraph 38. SBE believes that Section 74.707 of the FCC Rules is based on not allowing certain prohibited contour overlaps, and NOT simply on D/U ratios.

XV. First-Come, First-Serve Approach

27. At Paragraph 47, the ONPRM asks if Class A modification applications and the modification applications of full-service stations should be processed on a first-come, first-serve approach. SBE supports this approach, and also that modifying Class A stations only be required to protect actual permitted or licensed NTSC facilities, but be required to protect DTV allotments in addition to DTV permits and licenses. SBE also believes that all such applications should be subject to public notice and mutually exclusive competing applications filed prior to the cutoff date given in the public notice. SBE also believes that minor change Class A modification applications should be subject to Petitions to Deny; such a procedure allows potentially affected stations the right to independently check the application for continued compliance with all pertinent interference protection criteria, even where a mutually-exclusive application is not involved. This is an important safeguard, and should be available to full-service stations.

28. At Paragraph 49, the ONPRM proposes to allow displaced Class A stations to be permitted to apply for replacement channels on a first-come, first-serve basis, but NOT subject to mutually-exclusive applications. SBE opposes this. First, if Class A stations are primary, then after May 1, 2000, the only event which should be capable of displacing a Class A station would be a Petition for Rule Making to amend the DTV Table of Allotments, of which there should be relatively few. To allow a Class A station to apply for a major-change such as a channel change, but not to allow other stations to file mutually exclusive applications, gives Class A stations super priority over full-service NTSC and DTV stations. A Class A channel change application should be subject to public notice, and a 30-day period during which mutually exclusive applications could be filed.

XVI. Must-Carry Requirements

29. The December 23, 1999, comments of the Alliance for Community Media presumed that Class A TV stations would be eligible for must-carry status on local cable television systems, and expressed concern about the practice of “PEG Slamming,” which it defines as the shifting of a Public, Educational, or Governmental (“PEG”) cable channel from a low cable channel to a high cable channel, often with no advance notice to the PEG entity. As best SBE can tell, the CBPA is silent on must-carry rights for Class A TV stations, and therefore Class A TV stations have no special must-carry rights.

XVII. Canadian and Mexican Considerations

30. The CBPA, and the ONPRM, are silent on the issue of Class A TV stations in the border areas. The Commission needs to clarify whether Class A TV stations will be permitted within 400 kilometers of the Canadian border, and/or within 320 kilometers of the Mexican border and, if so, what additional requirements, if any, such stations will be obligated to meet before being upgraded to Class A status.

XVIII. Class A TV Interference Studies Should Be Based on the Main Beam ERP, and Not on the ERP at the Radio Horizon

31. A loophole in the processing of LPTV and TV Translator applications needs to be fixed before such stations are allowed to upgrade to Class A status. Footnote 5 to FCC Form 346 (“Application for Authority to Construct or Make Changes in a Low Power TV, TV Translator, or TV Booster Station”), indicates that the antenna gain to be specified is the gain towards the radio horizon. For LPTV stations employing high-gain antennas with narrow elevation patterns and significant amounts of electrical beam tilt, this means that there can be a significant difference between the station's ERP at the radio horizon and its main beam ERP. For example, LPTV Station KBIT-LP, NTSC Channel 28, San Francisco,⁷ has a radio horizon ERP of only 19 kW⁸, but a main beam ERP of 110 kW. This is because the station uses a high-gain transmitting antenna with a half-power beam width of only 1.8 degrees, and also employs 2.0 degrees of electrical beam tilt. For the station's effective height (HAAT) of 610 meters at Monument Peak, the angle to the radio horizon is 0.68

⁷ Formerly K30BI; this LPTV station has since been displaced from Channel 30 to Channel 28.

⁸ As will be demonstrated later in this paragraph, it appears that a more accurate figure for the station's ERP at the radio horizon is 25.3 kW (110 kW x 23%) rather than the claimed 19 kW, which would imply a relative field value of 0.416 at the radio horizon. As shown by Figure 1, the correct value appears closer to 0.48 relative field at the radio horizon.

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degrees below the horizontal, using the formula given in Section 73.684(c)(1) of the FCC Rules. Therefore the radio horizon falls 1.32° off of the main beam of the elevation pattern.. As shown by the attached Figure 1, at this angle the elevation pattern relative field is approximately 0.48; this reduces the supposed gain of the antenna to 23% of its main beam value.

32. It is, therefore, imperative that this loophole in the processing of LPTV and TV Translator applications be eliminated. This can easily and simply be accomplished by stipulating that for purposes of the interference study required as part of the certification for Class A status, the main beam ERP must be used, as opposed to the ERP at the radio horizon.⁹

XIX. Protection from Low Power Auxiliary Stations (FM Wireless Microphones)

33. SBE notes that full-service NTSC stations are protected against interference from Low Power Auxiliary Stations ("FM wireless microphones"). Section 74.802(b) of the FCC Rules requires FM wireless microphones to be at least 105 km (Zone I) or 129 km (Zones II and III) from a co-channel NTSC VHF low-band TV station, at least 97 km (Zone I) or 129 km (Zones II and III) from a co-channel NTSC VHF high-band TV station, and at least 113 km from a co-channel UHF TV station (all Zones).

34. SBE believes that LPTV stations qualifying for upgrade to Class A protected status should similarly be entitled to protection from FM wireless microphones, although to lesser preclusion distances than for full-service NTSC TV stations. SBE suggests a separation distance of 50 km for FM wireless microphones operating on a frequency that is co-channel to a Class A TV station, and that this distance apply in all Zones.

⁹ It should be noted that this problem was pointed out in the June 1, 1993, comments of Hammett & Edison, Inc., ("H&E") to MM Docket 93-114. The consulting firm of du Treil, Lundin & Rackley, Inc. ("dLR") independently filed similar comments pointing out the radio horizon versus main beam problem. However, the June 2, 1994, First Report and Order to MM Docket 93-114 ignored this issue, on the grounds that the matter was supposedly outside the scope of the NPRM (R&O, at Page 13, Footnote 41). This was nonsense, and the H&E and dLR comments were totally within the scope of the NPRM, which was a "review of the Commission's Rules Governing the Low Power Television Service." Accordingly, on June 29, 1994, H&E filed a Petition for Reconsideration. The firm of dLR filed a similar Petition for Reconsideration. To date, there has been no action on these Petitions.

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List of Figures

35. The following figures or exhibits have been prepared as a part of these MM Docket 99-292 comments:

1. Elevation pattern for Station KBIT-LP, showing main beam gain versus radio horizon gain.

Respectfully submitted,

Society of Broadcast Engineers, Inc.

/s/ James (Andy) Butler, CPBE
SBE President

/s/ Dane E. Ericksen, P.E., CSRTE
Chairman, SBE FCC Liaison Committee

/s/ Christopher D. Imlay, Esq.
Its Counsel

February 10, 2000

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Elevation Pattern for Antenna Concepts
28-bay Antenna Used by Station KBIT-LP

